Evaluating the employment probability: Men and women in comparative perspective in Attica and Central Macedonia

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ABSTRACT

This paper investigates unemployment risk and job prospects of males and females in the two Greece's most populated regions - Attica and Central Macedonia - during the implementation of the first Community Support Framework (1989-1993). Originality lies in the separate analyses for males and females. The sample is based on anonymous records (micro-data) of the Labour Force Survey for both employed and unemployed at Nomenclature of Territorial Units for Statistics-2 level. Firstly, social and demographic characteristics increasing the odds of being employed are examined - i.e. age, marital status, residence, education and training. Secondly, the issue of whether University graduates have lesser odds of being employed is investigated. The findings indicate that gender differences in odds of being employed appear mainly across education levels. Moreover, higher education attainment increases the odds of being employed particularly for females. The paper delivers conclusions that can be used for comparative research among European regions.

***Jel Code**: C21, J08, J24, J64, O18*

KEYWORDS

Cross-sectional Models, Labour Economics Policies, Human Capital, Skills, Unemployment Models, Regional, urban and rural analyses

ARTICLE HISTORY

Submitted: 6 August 2012
Resubmitted: 02 November 2012
Resubmitted: 11 January 2013
Accepted: 15 March 2013

Introduction

The programmes implemented in Greece and other EU member states under the Community Support Frameworks (CSFs) - which were infrastructure-related development projects and investments in physical and human capital - aimed to gear the economy onto a sustainable path of economic growth and development. The CSF goal of promoting growth through investments in infrastructure and human capital was the prerequisite for the cohesion of EU and the sustainability of the nominal convergence objective of the Maastricht Treaty in the way to the European Economic and Monetary Union. In this context, it is interesting to see if investment in human capital (education and training) in Greece had a real impact on the labour market.

The aim of the paper is to study the impact that social and demographic characteristics had on the labour market in the Greek Nomenclature of Territorial Units for Statistics (NUTS)-2 regions of Central Macedonia and Attica**,** during the implementation of the CSF-1 (1989-93). Greece consists of thirteen NUTS-2 regions. During the examined time period both regions belonged to the Objective 1 (European regions with a GDP per head less than 75% of the EU mean) of the EU Structural Funds. We choose Central Macedonia and Attica because the above regions are the largest in Greece in terms of population, and the two biggest urban agglomerations in the country (Athens and Thessaloniki) are situated in the regions under study; so, we research half of the Greek population. The reason we choose these years is because 1988 is the last year before the start of the implementation of the Structural Funds, whereas 1992 is the year of the Maastricht Treaty and also the first year of getting information on training programmes in the Greek Labour Force Survey (LFS). So, other studies can compare that period with more recent years. The main questions to be answered, analysing the data separately for males and females, are:

(i) What are the social and demographic characteristics that increase the chances of someone in the examined population finding a job?

(ii) Whether University graduates face greater difficulties in finding a job than the non-University graduates, as a series of studies (see Meghir *et al.*, 1989; OECD, 1990; Iliades, 1995; IN.E./GSEE-ADEDY, 1999; Katsikas, 2005) or aggregate statistics (LFS; Eurostat: Education and Employment Prospects, 1995) for Greece conclude.

(iii) How does the participation in training courses affect the chances of getting an employment?

We test male vs. female unemployment, and the human capital theory which provides one of the main explanations for the uneven incidence of unemployment by skill (education and training); we try to research whether the more educated and the more trained a person is, the higher the probability of him finding a job.

Previous labour market studies for Greece were based on qualitative research and LFS aggregated data. Our analysis of investigating the unemployment risk in the Greek labour market - at Nomenclature of Territorial Units for Statistics (NUTS) 2 level - is based on the micro-data of the Greek LFS. The access to the individual anonymised records of the Greek LFS was not allowed to researchers until the summer of 2005, due to the Data Protection Act.

The article starts discussing the gender unemployment issue. Then, we examine the relation between education and unemployment in the EU, and the impact of training programmes on the employment prospects of individuals in the EU and the rest of the OECD according to a series of studies; the results are based on both cross-sectional and longitudinal data. We also discuss the vocational training policies for the unemployed in Greece. Then, we refer to the macroeconomic indicators of the examined regions and follow a logit model for the years 1988 and 1992 - based on micro-data of the Greek LFS - for the two regions under study working separately for men and women. The article concludes with the impact of the socio-economic variables used on employment probability in the examined regions, and ends with some general comments on the merit and value of this study.

Literature Review

Male versus female unemployment: The theoretical context

There is an enormous literature on gender gaps in pay and a vast literature on gender gaps in labour force participation rates (see Altonji and Blank, 1999, and Blau and Kahn, 2003). Yet, there is very little written on gender gaps in unemployment rates (OECD, 2002, p. 63). According to OECD Statistical Compendium (1999b) the largest gender gaps in unemployment rates are to be found in the Mediterranean countries (Greece, Spain, Italy and France), following by the Benelux countries

(Belgium, the Netherlands and Luxembourg), the "Germanic" countries (Germany, Austria and Switzerland), then the "Nordic" countries (Sweden, Finland and Norway) and, finally, the "Anglo-Saxons" (US, UK, Ireland, Australia, Canada and New Zealand). In a number of the Mediterranean countries the 'unemployment problem' is largely a problem of female unemployment.

According to International Labour Organisation (ILO) to be classified as unemployed people must have looked for work in the recent past and are available to start work in the near future. Sometimes women that do not want to work because of domestic responsibilities (to take care of children and the elderlies) are considered as unemployed, not as inactive. This fact 'spills over' into a higher female unemployment rate. If this is true then the female unemployed in 'high-gap' countries may be less serious about wanting a job and taking steps to get one than the male unemployed (Azmat *et al.*, 2004b).

In many of the European countries with high unemployment rates, the female unemployment rate is substantially above the male. Women in all countries tend to have higher flows into inactivity both from employment and unemployment. However, in the 'high-gap' countries (namely with a large gender gap in unemployment rates) women tend to have higher flows from employment into unemployment and from unemployment into employment, namely in both flows. Providing explanations for this is not so easy and it is much simpler to present evidence against hypotheses than evidence in favour of them (Azmat *et al.,* 2004a).

Data from the first six waves 1994-1999 of the European Community Household Panel Survey (ECHPS) shows that in the Mediterranean or 'high-gap' countries, the gender gaps in unemployment rates are largest among the young, the married and those with young children.

It is true that there is a lot of variation in the extent of part-time employment and that it tends to be relatively rare in the 'Mediterranean' countries which have large gender gaps in unemployment rates. But the unemployed women in these countries do not report that they are looking for part-time jobs and it seems likely that the lack of availability of part-time work can explain low female participation rates in some countries but not their high unemployment rates (Eurostat, LFS, 1996).

The human capital approach and the human capital theory

The role of education in explaining how the labour market operates represents one of the main areas of disagreement between labour market theories. During the late 1950s and early 1960s the current neoclassical theory of the labour market emerged with the development of the human capital theory. Gary Becker (1964 - 2nd ed., 1975) published a book with the title "Human Capital" which developed a theory of human capital formation and analysed the rate of return to investment in education and training. However, investment in human capital remains a controversial issue (Woodhall, 1987; Kapstein, 2001; de la Fuente, 2003).

Whilst the human capital literature has highlighted a number of productivity-related characteristics, human capital theorists give most emphasis to the importance of education and training as the main component of productivity (Blaug, 1975). Education, it is suggested, provides the basic skills of reading and writing, cognitive skills, and the "ability to learn" which will increase an individual's productivity in all jobs (general human capital), whilst vocational education, on the other hand, will increase an individual's productivity in a narrower range of jobs by providing more specific skills (specific human capital).

Becker (1962) distinguishes general from specific human capital of workers, and within specific human capital between employer- and employee-financed on-the-job training. Most broadly the theory of specific human capital predicts that where the fixed costs of employment, due to on-the-job training, are greatest, unemployment is lowest (Rees, 1973, pp.118-20).

Following Becker's (1964) analysis on the economic role of human capital, particularly education, there is now a considerable amount of empirical research on the closely related topics of education and skills [see Prais (1995); Murray and Steedman (1998)] and, more specifically, the increasing role of skilled labour in the economy [Berman *et al.* (1994); Machin (1996); Machin and van Reenen (1998)].

Training as a human capital

To examine what constitutes training, it is necessary to divide it into two significant purposes. Firstly, it is possible to view training as an investment in human capital,

perhaps adding to the skills gained in the first education. Secondly, training can be a replacement of initial education with company training when there is a mismatch between skills the employee has and those needed. Theoretically, these different purposes belong to two theoretical viewpoints, which sometimes coincide: the human capital theory and matching theory. It can be considered that these theories coincide because it could be an investment to train to add to skills. However, the two theories are based on diverse approaches to training (van Smoorenburg and van der Velden, 2000).

Human capital theory holds that it is the type of training input that largely determines the amount of increase in job tenure. In actual fact, training is not totally general or totally particular (Stevens, 1994). Job tenure will become greater if training is particularly connected to the company, than if it is general (in the classroom). It is less likely the worker will leave then. Also, employers are not keep to let workers go when they have paid for them to learn particular skills. However, when training is general, there is nothing to tie the worker to his existing job, since his skills may be of use in all companies. This difference also applies where weakly transferable and widely transferable training are involved. If this is true, it is reasonable to assume that classroom training is more transferable for the unemployed and training at work leads to greater job tenure (Cockx *et al.*, 1998). On the whole, employers need skilled workers, involving work experience as well as training, so classroom training is not sufficient on its own.

Matching theory claims that under-education will result in an increased necessity for more training. Less necessity for training, however, arises from over-education. It is not yet certain if training can make up for inadequacies in formal education (substitution) or if it can just add to variations in human capital (complementarity) that are already present. It might be inferred, though, that it is only the features of the job (level and kind of job) in which the substitution features of training are to be found and that it is only in the features of the formal education (level and breadth) that the complementarity nature of training is obvious (van Smoorenburg and van der Velden, 2000).

According to credentialist and screening theories (Blaug, 1975), initial training does not serve as an investment aimed at increasing human capital so much, but instead certificates acquired from training can reveal what workers are capable of. On the other hand, Blaug notes various kinds of credentialist theory and the weak kind is not at variance with human capital (Tatch *et al.*, 1998).

Unemployment and skills in Greece and the rest of the EU

Educational level and unemployment in the EU

Table 1 gives unemployment rates by qualification in different EU countries according to Eurostat data. The differences were enormous. There are only a few countries where this inverse relation between unemployment and qualification did not exist: in Greece and Portugal unemployment among people on ISCED (International Standard Classification of Education) 3 level (Lyceum) was higher than among the less qualified, but not among the University graduates (ISCED 5-7); in Italy and Luxembourg, unemployment rates among the highly qualified (ISCED 5-7, University) exceeded those of people with intermediate qualifications.

Table 1. Unemployment rates by level of educational attainment[(1)]; EU 1994

Country	ISCED 0-2[c]	ISCED 3[b]	ISCED 5-7[a]
BEL	12.5	7.5	3.7
DEN	12.6	8.3	4.6
GER	14.8	8.9	5.3
GRE	6.2	8.3	5.3
ESP	22.4	20.0	15.1
FRA	14.8	9.7	6.6
IRL	21.0	9.1	5.3
ITA	9.3	7.4	8.1
LUX	3.7	1.9	2.4
NL	12.6	7.7	5.5
POR	6.1	6.4	2.4
UK	11.2	7.9	4.1
EU-12	**13.2**	**8.8**	**6.1**

(1) 25-59 years old
Source: Eurostat: Education and Employment prospects, 1995.
[a] All first and higher degrees. All teaching, nursing qualifications. HNC/HND.
[b] 1 or more A-level passes, GNVQ 3 and equivalent, NVQ 3 and equivalent. Trade apprenticeship. GNVQ 2 or equivalent, NVQ2 or equivalent.
[c] ISCED 2: 1 or more O-level/ GCSE passes, 1 or more CSE passes. All other qualifications.

ISCED 0-1: No qualifications.

Looking at the long-term unemployment (LTU) of different skill levels, we again find that intermediate and higher educated people were less affected. This is true for the whole Union except Spain and Greece, where LTU was higher on ISCED levels 3 and 5-7 compared to levels 0-2, for Italy where LTU was the highest on ISCED 3

level, and for Luxembourg and Portugal where the ratios of ISCED levels 0-2 and 3 were equal (Eurostat, Education and Employment Prospects, 1995).

Training evaluation in Europe and Greece

Findings on European training programmes' evaluation

Up-to-date evaluation studies point to minor impacts of European training policies and they are most likely less significant and not always as positive as those responsible for designing them had wished. Although the cross-national figures show a few positive results from programmes, it is impossible to disregard the more negative results. The findings allow us to conclude that training programmes seem to have some positive effects on employment and no effects on earnings. Moreover, effects diminish over time. The negative effects reported by several evaluations can be explained, on the one hand by a locking-in effect, and on the other by the fact that some participants seem to enrol in training merely in order to collect unemployment insurance benefits (Cueto and Mato, 2009). The conclusions based on the recent studies are somewhat similar to those of Heckman et al. (1999) and Stanley et al. (1999) for the U.S.

In spite of being restricted to only a small number of nations, micro-economic studies of effect evaluations, based on both cross-sectional and longitudinal data, indicate that some programmes have managed to noticeably better employment prospects for those taking part. On the other hand, the findings include a number of programmes which appear to have had almost no effect. Programmes with fairly specific targeting have managed positive results and this may be due to the fact that these programmes usually take account of individual requirements. However, a number of programmes that were most widely targeted have had little impact.[1]

1 See Kaitz, 1979; Ridder, 1986; Card and Sullivan, 1988; Ham and Lalonde, 1991; Gritz, 1993; OECD, 1993; Bonnal *et al.*, 1994; Torp, 1994; Calmfors and Skedinger, 1995; Jackman, 1995; Bjorklund and Regner, 1996; Fay, 1996; Jackman *et al.*, 1996; Zweimuller and Winter-Ebmer, 1996; Cockx *et al.*, 1998; Kluve *et al.*, 1999; Gerfin and Lechner, 2000; Lechner, 2000; Brodaty *et al.*, 2001; van Ours, 2001; Kluve and Schmidt, 2002; Raaum and Torp, 2002; Regner, 2002; Cockx, 2003; Weber and Hofer, 2003; Graversen, 2004; Hamalainen and Ollikainen, 2004; Hujer *et al.*, 2004; Leetmaa and Vork, 2004; Rosholm and Svarer, 2004; Albrecht *et al.*, 2005; Arellano, 2005; Cavaco *et al.*, 2005; Centeno *et al.*, 2005; Fitzenberger and Speckesser, 2005**;** Hogelund and Holm, 2005; Kluve *et al.*, 2005; Lechner *et al.*, 2005; Lorentzen and Dahl, 2005; Malmberg-Heimonen and Vuori, 2005; Steiger, 2005; Stenberg, 2005; Aakvik and Dahl, 2006; Winter-Ebmer, 2006; Biewen *et al.*, 2007; Lechner *et al.*, 2007; Mato and Cueto, 2008; Meadows and Metcalf, 2008; Rosholm and Skipper, 2009; Kluve, 2010.

Lastly, to establish the ways in which programmes can be made better more research is necessary.

Vocational training policies for the unemployed in Greece

The situation in Greece is complicated with low level of investments to training programmes compared to the rest of the EU, and weak interconnection among targeting of training programmes and needs of labour market.
The structure of expenditures for "active" interventions in 1997 shows that the level of expenditures in Greece (0.35%), as a percentage of the GDP, is behind that of the EU-15 average (1.13%) concerning all specific interventions, with the exception of "measures for the young" (youth vocational education and training, etc. 0.10%) which are comparable to the European average (0.13%). Furthermore, there is a quite low level of expenditures on the training of adults (0.06% for Greece in comparison to 0.29% for the EU-15) - (OECD, Employment Outlook, 1999a).

The system of continuing vocational training (CVT) in Greece was developed mainly due to its incorporation in Community funding programmes (Iliades, 1995; Chletsos, 1998; Papakonstantinou, 1998). Policies concerned with training and retraining for the unemployed have been confined to continuing training programmes. Vocational training programmes for the unemployed were unconnected with employment policies (Gravaris, 1991, p. 37; Christodoulakis and Kalyvitis, 1995; Balourdos and Chryssakis, 1998; Economic and Social Committee of Greece, 1998). This is reflected in the fact that the unemployment rate for those (20-29 years old) with complementary vocational training in Greece was 20%, compared to 14% for those with only compulsory schooling; the corresponding figures for the EU were 11.5% and 23.5% (see *Table 2*).

Table 2. Unemployment rates among young people (20-29) with basic education and those with supplementary vocational education and training (EU - 1995 figures)

COUNTRIES	BASIC EDUCATION	BASIC EDUCATION PLUS SUPPLEMENTARY VOCATIONAL EDUCATION / TRAINING
EU-14	**23.5**	**11.5**
Belgium	24.3	19.7
Denmark	17.7	8.5
Germany	16.2	7.6
Greece	14.3	20
Spain	33.9	34.9
France	30	17.1
Italy	22.2	15.9
Luxembourg	5.7	:
Netherlands	14.8	7.2
Austria	:	4
Portugal	11.2	16.2
Finland	35.4	23.6
Sweden	21.7	:
UK	18.5	10

Ireland – No figures available
: = Data unreliable
Source: Eurostat (as quoted in Economic and Social Committee of Greece, 1998, p. 31).

The market of CVT in Greece is insufficiently covered, leaving many sectors unattended, mainly due to the lack of specific demand and supply structures (Chasapis, 1994). Training in Greece runs in the same way from early 1990s up to now and there is no in-depth and detailed analysis of the labour market needs. Although in the field of training in Greece the real expenditure (absorption) of EU funds is 100%, there is no change in the philosophy, design and implementation of programmes during the three CSFs (INE/GSEE, 2008). Only the financial control was strict during the second and the third CSFs. The most successful programmes in terms of matching supply and demand for labour are mainly those on accountancy and informatics (authors' personal experience).

Particularly with regard to training programmes for the unemployed in Greece, the method of identifying skills requirements, on the basis of which the programmes were offered, was wholly inadequate. It was based on changes in labour force categories derived from the LFS, on estimates of the impact of investment programmes on employment (where these existed or where such estimates were possible) and on Job Market

Surveys. These last record shortages of skills on the basis of company estimates of their own shortages, which were often inaccurate or did not correspond to the capacity of the firms to utilise the skills demanded (Linardos-Rylmon, 1998).

Macroeconomic data of the examined regions

The Region of Central Macedonia (RCM)

Central Macedonia is the largest region of Greece (19,147 km^2 - 14.5% of the country's surface) and is situated in the centre of Northern Greece. The RCM consists of seven NUTS-3 areas (Thessaloniki, Serres, Chalkidiki, Imathia, Pella, Kilkis and Pieria) and is the second largest Greek region in terms of population (about 1.7 million inhabitants according to 1991 census) after that of Attica, whereas the population of the entire Greece was approximately 10.26 million. Between the census of 1991 and 2001 the population rose by 9.6%, a rise higher than the national mean (6.9%). Also, the major urban centre and capital of Central Macedonia is Thessaloniki, which is the second most important Greek city. According to 1991 census the population of the Thessaloniki Area was about 750,000 inhabitants, whereas that of the county of Thessaloniki was approximately 945,000 inhabitants. The main cities are Thessaloniki-Veria-Serres-Katerini-Naoussa-Edessa-Polygyros-Kilkis. The main industries were textiles, plastic-chemicals, food-beverages and clothing. In 2003, the region's per capita GDP (PPS) was 17,110 euro (83% of the EU-25 average), whereas Thessaloniki and Chalkidiki were the richest counties of the region having a GDP per head equal to 90.3% and 89.5% correspondingly of the EU-25 mean. In 2003 the region produced 17.6% of the country's GDP (the second largest contributor after Attica) - 18% of the national agricultural produce (first in the country), 20% of the manufacturing production (second in the country) and 18% of services (second in the country). The unemployment rate in the RCM was 9.2% in 1992 and increased to 11.5% in 2002 [source: ΕΣΥΕ (www.statistics.gr)].

The Region of Attica

The Region of Attica (NUTS-2) - which is geographically situated in Central Greece - is the one and only region-county (NUTS-3) in Greece, since according to 1991 census its population size was about 3.5 million inhabitants; namely, 3 out of 10

Greeks lived in Attica. The capital of the region is the city of Athens, which is by far the most important Greek city in economic, administrative and political terms. In 1988, Attica's GDP was equal to 61% of the EU-12 average (58% for Greece as a whole), whereas in 1996 the region improved its position since its GDP was 77% of the EU-15 mean (68% for the country as a whole) and 86% of the EU-25 mean in 2003 (80.9% for Greece as a whole). In 2003, Attica was ranked third among the 13 Greek regions, based on that criterion (GDP per capita), after Central Greece and the Southern Aegean. The Region of Attica produces 37.4% of the country's GDP - 2.7% of the country's agricultural produce, 35.5% of the manufacturing and 42% of services (2001) – [sources: www.ypes.gr/attiki and ΕΣΥΕ (www.statistics.gr)]. There was an increase in the percentage of unemployed from 10% in 1988 to 11.7% of the workforce in 1995[2]. The male unemployment rate was 6.47% in 1988 and 8.4% in 1995, whereas the corresponding female percentages were 16.32% and 16.86%. LTU - as percentage of total unemployment - amounted to 45.4% in 1988 and 50.9% in 1995 (LFS).

Methodology, Analysis/Findings/Discussions

Econometric model: Logistic regression for unemployment

The logistic regression based on the micro-data of the Greek LFS

European Community Household Panel Survey (ECHPS) and Survey on Income and Living Conditions (SILC) data have been designed for the country as a whole in the case of Greece, so we cannot really work at regional level. Also, individual census records do not exist in Greece, like e.g. in Denmark, so the only way is to base our research on the LFS micro-data.

The originality of this research is that we use individual anonymised records (micro-data) of the LFS for both employed and unemployed (about 1.5% of the total population of each region). The questionnaire of the Greek LFS was greatly modified in 1992.

2 The percentage of unemployment is characterized by an augmentative tendency with the exception of the two year period 1989-1990, during which it shows a temporary decrease.

Tables 3 and 4 display the frequency distribution of the binary variables for 1988 and 1992 respectively. Due to their binary nature, statistics about their central tendency and dispersion would be perplexing. Apart from the system missing records, following the limitation of age (15-64 years old) and removing the non-active population, we ended with the following numbers of records available for analysis in each region (in the spring and early summer, namely from the 14th to 26th week of the year):

Table 3. Descriptive statistics for the sample of 1988

Variables	Central Macedonia				Attica			
	Males (6.075)		Females (3.633)		Males (12.708)		Females (7.214)	
	Frequencies	Share	Frequencies	Share	Frequencies	Share	Frequencies	Share
Employed	5,804	95.50%	3,233	89.00%	11,876	93.50%	6,028	83.60%
Unemployed	271	4.50%	400	11%	832	7.50%	1,186	16.40%
Married or divorced or widows	4,763	78.40%	2,777	76.40%	9,507	74.80%	4,705	65.20%
Aged 15-24	657	10.80%	580	16.00%	1,157	9.10%	1,342	18.60%
Aged 25-34	1,361	22.40%	957	26.30%	3,358	26.40%	2,489	34.50%
Aged 35-44	1,578	26.00%	929	25.60%	3,691	29.00%	1,936	26.80%
Aged 45-64	2,479	40.80%	1,167	32.10%	4,502	35.40%	1,447	20.10%
MSc or PhD holders	27	0.40%	11	0.30%	175	1.40%	70	1.00%
University graduates	525	8.60%	400	11.00%	1,778	14.00%	1,208	16.70%
TEI graduates	225	3.70%	177	4.90%	1,386	10.90%	821	11.40%
12 years of schooling	933	15.40%	641	17.60%	2,835	22.30%	2,307	32.00%
9 years compulsory education	794	13.10%	255	7.00%	1,877	14.80%	545	7.60%
Primary school graduates and below	3,494	57.50%	2,080	57.30%	4,429	34.90%	2,017	28.00%

Table 4. Descriptive statistics for the sample of 1992

Variables	Central Macedonia				Attica			
	Males (5.815)		Females (3.475)		Males (12.559)		Females (7.742)	
	Frequencies	Share	Frequencies	Share	Frequencies	Share	Frequencies	Share
Employed	5,537	95.20%	3,056	87.90%	11,703	93.20%	6,453	83.40%
Unemployed	278	4.80%	419	12.10%	856	6.80%	1,289	16.60%
Married or divorced or widows	4,385	75.40%	2,579	74.20%	9,021	71.80%	5,097	65.80%
Aged 15-24	579	10.00%	525	15.10%	1,260	10.00%	1,360	17.60%
Aged 25-34	1,307	22.50%	935	26.90%	3,367	26.80%	2,478	32.00%
Aged 35-44	1,467	25.20%	934	26.90%	3,414	27.20%	2,236	28.90%
Aged 45-64	2,462	42.30%	1,081	31.10%	4,518	36.00%	1,668	21.50%
MSc or PhD holders	33	0.60%	17	0.50%	100	0.80%	37	0.50%
University graduates	583	10.00%	460	13.20%	2,197	17.50%	1,435	18.50%
TEI graduates	221	3.80%	221	6.40%	892	7.10%	708	9.10%
12 years of schooling	1,132	19.50%	769	22.10%	3,529	28.10%	2,990	38.60%
9 years compulsory education	794	13.70%	307	8.80%	1,879	15.00%	641	8.30%
Primary school graduates and below	3,052	52.50%	1,701	48.90%	3,962	31.50%	1,931	24.90%
Apprenticeship	34	0.60%	27	0.80%	53	0.40%	32	0.40%
Intra-firm training	13	0.20%	9	0.30%	7	0.10%	5	0.10%
CVT	41	0.70%	9	0.30%	37	0.30%	10	0.10%
Popular training	5	0.10%	5	0.10%	3	0.00%	0	0.00%
Non-participation in trainings course(s) ever	5,722	98.40%	3,425	98.60%	12,459	99.20%	7,695	99.40%

The majority of individuals in the sample are married (over two thirds of total population), divorced or widowed. Both in 1988 and 1992, most males are in the age range of 45-64, while the age range 15-24 represents roughly 10% of total males. A similar but not that dispersed division of age groups population is also depicted for females in Central Macedonia, both for 1988 and 1992. On the contrary, female population of Attica both in 1988 and 1992 is primarily concentrated on the age

groups of 25-34 and 35-44. With regard to education, the majority of the population is concentrated to primary school graduates and twelve years of schooling. Females and the residents of Attica indicate a higher share in higher education. Participation in training courses is particularly small, mainly through CVT and apprenticeship for males, and apprenticeship for females.

The basic aim of the econometric analysis is to test the impact that various social and demographic characteristics had on people's job prospects in the Regions of Central Macedonia and Attica, during the implementation of the CSF-1 (1989-93). We use a logistic regression model. Regression models allow for group comparisons adjusting for demographic and socio-economic variables. It should be noted that regression-adjusted comparisons may still provide misleading results when other important variables that might have an effect are omitted.

The dependent variable takes two possible values (employed versus unemployed). A full description of the explanatory variables is given below and are among the most important variables generally acknowledged as affecting access to labour market. The models were fitted using SPSS version 18.0.

The effect of demographic variables such as age, gender, marital status, as well as educational level and participation in training programmes (the last is only available in 1992) on the employment status, is investigated with a logistic regression model due to the categorical nature of the dependent variable. The binary logistic regression equation is:

$$e = \beta_0 + \beta_1 m.s. + \beta_{2\text{-}4} a.g. + \beta_{5\text{-}9} educ. \qquad (1988)$$

$$e = \beta_0 + \beta_1 m.s. + \beta_{2\text{-}4} a.g. + \beta_{5\text{-}9} educ. + \beta_{10\text{-}13} tr. \qquad (1992)$$

where e (employment status) is the logit (ln of the odds) of being unemployed. The independent variables are – in the order appearing in the equation – gender, marital status, age groups, education achieved and training (or not). Age groups, education achieved and training are groups of contrasting variables. The parameter estimates $\beta - \beta_0$ is the constant – are the odds ratio of the independent variables.

It should be noted that we are only capturing causal effects under very strong and unrealistic assumptions, but the estimates are still interesting as they show whether the descriptive patterns hold up against additional control variables.

Also, measurement errors in the "treatment" variables (education and/or training) will lead to downward bias in the regression's estimates.

A limitation of the research is that the data available are cross-sectional rather than longitudinal and therefore we cannot study any population changes across time.

Description of the variables

We define now the complete list of variables together with their coding values that we use in the model. The reference category of each variable is underlined.

Dependent variable

Employment Status (STA1) (Unemployed, Employed)

Explanatory variables

1) Gender (Female, Male)

2) Marital status (Married or divorced or widows *against* Non-married)

3) Age groups
   15-24 years old
   25-34 years old
   35-44 years old
   45-64 years old

4) Level of education
   University graduates
   MSc or PhD holders
   Technological Educational Institutions (TEI) graduates
   Lyceum graduates (12 years of schooling) or not finished University
   High-school graduates (9 years-compulsory education)
   Primary school graduates or not finished primary school or never in school.

5) Participation in the past in training course(s)
   Apprenticeship
   Intra-firm training
   Continuing vocational training (CVT)
   Popular training
   Non-participation in the past in training course(s)

The base (or reference) categories are those that appear in the *Tables 5-8* with empty cells and with which the rest of the corresponding variables are compared. The reference categories are chosen so as to match the needs of the research.

The working age population is between 14-65 years old. However, marking in SPSS the ages 14 and 65 we also include those who are 13 and 66 years old something which we want to avoid; so, we include people from 15 to 64. We examine people below and over 30 since until the age of 30 years old, employment is often not "permanent" due to (post)graduate studies and working experience acquisition, plus fulfilment of compulsory military service for men.

The variable "participation in the past in training course(s)" first appeared in the 1992 questionnaire; it means that the interviewee had completed one or more training courses. This is also an indication of the attitude towards training in Greece at the beginning of the 1990s. The duration of apprenticeship and intra-firm training had to be at least one year according to the questionnaire of the Greek LFS. The term "popular training" (*laiki epimorphosi* in Greek) means training courses intended mainly for elderly people independently of their educational level, where the curriculum includes largely courses of general knowledge. We cannot examine the impact of training on earnings, because this kind of information does not exist in the questionnaire of the Greek LFS.

Concerning the residence location (see robustness checks in sections 5.2 and 5.3) in the case of Attica in 1988 there were some reservations which may be related to the fact that the 1992 LFS data are better than those of 1988, as the most recent data are better than those of 1992. Consequently the investigation of the subsequent years is needed in order to have a clearer picture in the 1990s given the fact that, as mentioned in the introduction, the Greek LFS micro-data are now available to researchers.

Tables 5-8 present the estimated coefficients (B) and their standard errors (S.E.) of each explanatory variable in the logistic regression for unemployment. The column "Sig." (level of statistical significance or p value) corresponds to the probability of the rejection area.

Results for Central Macedonia

Table 5 displays the odds of being unemployed at Central Macedonia in 1988. The $Exp(b_k)$ column displays the odds ratio. Odds ratios less than 1.000 correspond to decreases and odds ratios more than 1.000 correspond to increases in odds. Odds ratios close to 1.000 indicate that unit changes in that independent variable do not affect the dependent variable. Parameter estimates are significant at 1% level except for some groups in education (MSc or PhD holders, TEI graduates, 12 years of schooling for males, and these plus 9 years compulsory education for females).

Gender differences are present only for the level of education. Both for males and females, the odds of being unemployed compared to being employed are increased by being not-married rather than married. Both for males and females, the odds of being unemployed compared to being employed are decreased by being 25 years old or more. Both for males and females, the odds of being unemployed compared to being employed are increased by holding a first degree except for two educational categories. For males, the odds of being unemployed compared to being employed are increased being a TEI graduate rather to holding a first degree. For females, the odds of being unemployed compared to being employed are increased by completing postgraduate education rather to holding a first degree.

The robustness checks provide evidence of structural validity and vary according to the distribution of the population. They indicate that the odds for employment are increased for higher education graduates/postgraduates aged 30 and more or not leaving in Thessaloniki (the latter is not demonstrated for males).

A notable difference for geographical grouping with respect to males, is that the odds of being unemployed compared to being employed are increased for being a TEI graduate rather to holding a first degree, when based in Thessaloniki. The respective odds are significantly decreased when based in rural areas. For males aged less than 30 the odds of being unemployed compared to being employed are increased by completing postgraduate education and decrease by being a TEI graduate rather to holding a first degree. On the other hand, for males aged 30 or more, the odds of being unemployed compared to being employed are increased considerably by achieving any educational level (except for postgraduate education) rather to holding a first degree.

In addition, for females in rest urban areas the odds of being unemployed compared to being employed are increased by achieving any educational level (postgraduate education is not available) rather to holding a first degree. For females aged less than 30 the odds of being unemployed compared to being employed are increased by completing postgraduate education rather to holding a first degree. For females aged more than 30 the odds of being unemployed compared to being employed are increased by achieving any educational level (except for postgraduate education) rather to holding a first degree.

Table 5. Results for Central Macedonia (1988)

MALES					Robustness checks							
					Thessaloniki		Rural areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-1.38	0.21	0	0.252	0	0.223	0.18	0.475	0	0.205	0	0.197
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.94	0.17	0	0.393	0	0.32	0.01	0.34	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.5	0.28	0	0.223	0	0.199	0	0.109	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.09	0.27	0	0.338	0.01	0.383	0	0.082	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	-0.13	1.05	0.9	0.88	0.87	0.843	n.a.	n.a.	0.84	1.292	0.74	0.085
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	0.151	0.34	0.65	1.163	0.57	1.254	0.47	0.407	0.42	0.725	0.26	2.402
12 years of schooling	0.061	0.22	0.78	1.063	0.93	0.977	0.41	0.538	0.06	0.617	0.01	4.375
9 years compulsory education	-0.76	0.24	0	0.468	0.02	0.459	0.05	0.211	0	0.255	0.06	3.118
Primary school graduates and below	-0.65	0.21	0	0.521	0.34	0.783	0.03	0.208	0	0.194	0.02	3.395
Constant	-1.01	0.2	0	0.364	0	0.44	0.48	0.605	0	0.486	0	0.028

FEMALES					Robustness checks							
					Thessaloniki		Rest of urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-0.73	0.14	0	0.481	0	0.491	0	0.387	0	0.388	0	0.46
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.68	0.15	0	0.507	0	0.4	0.15	0.619	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.27	0.2	0	0.28	0	0.244	0	0.243	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.78	0.23	0	0.169	0	0.187	0.01	0.332	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	0.339	0.82	0.68	1.404	0.67	1.418	n.a.	n.a.	0.35	3.249	0.73	0.064
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	-0.37	0.25	0.14	0.688	0.03	0.471	0.95	1.036	0.03	0.528	0.47	1.592
12 years of schooling	-0.19	0.17	0.26	0.829	0.07	0.702	0.3	1.552	0	0.506	0	3.983
9 years compulsory education	-0.19	0.21	0.35	0.824	0.58	0.866	0.24	1.798	0	0.427	0	8.312
Primary school graduates and below	-0.57	0.17	0	0.567	0.27	0.784	0.31	1.51	0	0.3	0.07	2.074
Constant	-0.43	0.15	0	0.648	0.09	0.751	0.13	0.567	0.36	0.87	0	0.049

Table 6 displays the odds of being unemployed at Central Macedonia in 1992. Parameter estimates are significant at 1% level except for education (lyceum graduates are significant for women) and training. Marital status for females is significant at 5% level.

Gender differences are present only for the level of education and training. Both for males and females, the odds of being unemployed compared to being employed are increased by being not-married rather than married. Both for males and females, the odds of being unemployed compared to being employed are decreased by being 25 years old or more. For males, the odds of being unemployed compared to being employed are increased by completing secondary education or being an MSc or PhD holder rather to holding a first degree. For females, the odds of being unemployed compared to being employed are increased by achieving any educational level (except for postgraduate education) rather to holding a first degree. For males, the odds of being unemployed compared to being employed are increased by completing an apprenticeship rather to not participating in training courses. For females, the odds of being unemployed compared to being employed are not increased only by completing CVT.

The robustness checks provide evidence of structural validity and vary according to the distribution of the population. In general, they indicate that the odds for employment are increased for higher education graduates aged 30 and more or leaving in Thessaloniki (TEI graduates also enjoy increased odds in some categories). Moreover, apprenticeship increases the odds for employment for males that do not reside in Thessaloniki.

A notable difference for males of Thessaloniki - as compared to those of rural areas - is in the increased odds of being unemployed compared to being employed by completing all educational levels (except for 9 years compulsory education) rather to holding a first degree. Also for males in rural areas the odds of being unemployed compared to being employed are significantly decreased by completing an apprenticeship rather to not participating in training courses. Another notable difference is for males aged more than 30 years old - as compared to those less than 30 - where the odds of being unemployed compared to being employed are not increased only by being a TEI graduate rather to holding a first degree. MSc or PhD holders have greater odds to be unemployed compared to those holding a first degree.

The difference between Thessaloniki and the rest of urban areas for females is in the decreased odds of being unemployed by being a TEI graduate rather to holding a first degree. Another difference regarding the rest of urban areas is in the increased odds of apprenticeship. The differences between the age groups of females are in the decreased odds of being

unemployed by being a postgraduate or completing up to nine years of schooling (two categories) rather to holding a first degree for the group of less than 30 years old. Another difference is in the increased odds of apprenticeship for the group of 30 years old or over, and the increased odds of intra-firm and popular training for the group of less than 30 years old.

Table 6. Results for Central Macedonia (1992)

MALES					Robustness checks							
					Thessaloniki		Rural areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-1.18	0.192	0	0.307	0	0.292	0.02	0.174	0	0.332	0	0.235
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.42	0.165	0.01	0.658	0.01	0.569	0.06	0.397	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.23	0.267	0	0.293	0	0.231	0.25	0.359	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.01	0.259	0	0.365	0	0.287	0.56	0.625	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	0.979	0.653	0.13	2.661	0.08	3.333	n.a.	n.a.	0.74	1.601	0.18	2.964
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	-0.1	0.363	0.79	0.907	0.57	1.282	0.27	0.253	0.8	0.895	0.28	0.321
12 years of schooling	0.128	0.232	0.58	1.136	0.31	1.339	0.17	0.342	0.41	0.784	0.28	1.528
9 years compulsory education	-0.42	0.261	0.11	0.66	0.47	0.78	0.04	0.191	0	0.311	0.07	2.056
Primary school graduates and below	-0.33	0.231	0.15	0.717	0.14	1.551	0.01	0.133	0	0.377	0.34	1.395
Apprenticeship	0.342	0.639	0.59	1.408	0.75	1.418	0.73	0.008	0.89	1.122	0.59	1.743
Intra-firm training	-4.22	9.881	0.67	0.015	0.63	0.042	0.92	0.027	0.76	0.019	0.77	0.035
CVT	-0.79	1.027	0.44	0.455	0.4	0.421	0.8	0.014	0.78	0.748	0.58	0.026
Popular training	-3.68	16.22	0.82	0.025	0.79	0.052	0.96	0.17	n.a.	n.a.	0.84	0.038
Non-participation in trainings course(s) ever	-	-	-	-	-	-	-	-	-	-	-	-
Constant	-1.48	0.24	0	0.229	0	0.244	0.37	0.525	0	0.308	0	0.062

FEMALES					Robustness checks							
					Thessaloniki		Rest of urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-0.3	0.146	0.04	0.74	0.17	0.781	0.03	0.449	0	0.575	0.12	0.673
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.78	0.157	0	0.457	0	0.424	0	0.304	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.15	0.193	0	0.315	0	0.253	0	0.229	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.82	0.224	0	0.162	0	0.165	0	0.159	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	-0.46	1.047	0.66	0.629	0.66	0.63	n.a.	n.a.	0.69	0.022	0.71	1.497
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	0.295	0.25	0.24	1.344	0.48	0.797	0.08	3.125	0.35	1.33	0.93	1.046
12 years of schooling	0.52	0.191	0.01	1.682	0.08	1.464	0.08	2.851	0.05	1.59	0.01	2.3
9 years compulsory education	0.237	0.23	0.3	1.268	0.37	1.281	0.44	1.702	0.77	0.919	0	3.503
Primary school graduates and below	0.121	0.195	0.54	1.128	0.02	1.73	0	5.857	0.06	0.563	0.06	1.768
Apprenticeship	0.551	0.468	0.24	1.735	0.99	0.996	0.6	1.164	0.17	0.231	0	6.934
Intra-firm training	0.149	0.845	0.86	1.161	0.45	0.017	n.a.	n.a.	0.73	1.353	0.77	0.024
CVT	-0.73	1.081	0.5	0.48	0.58	0.026	0.71	0.035	0.74	0.689	0.74	0.027
Popular training	1.133	1.144	0.32	3.104	0.26	3.746	n.a.	n.a.	0.64	5.585	0.72	0.02
Non-participation in trainings course(s) ever	-	-	-	-	-	-	-	-	-	-	-	-
Constant	-1.13	0.195	0	0.324	0	0.371	0.14	0.397	0	0.323	0	0.061

Results for Attica

Table 7 displays the odds of being unemployed at Attica in 1988. Parameter estimates are significant at 1% level except for some groups in education. Significant estimates for education groups regarding males are those for MSc or PhD holders and 9 years compulsory education (10% level). The latter category has also significant estimates for females (3% level).

Gender differences are present only for the level of education. Both for males and females, the odds of being unemployed compared to being employed are increased by being not-married rather than married. Both for males and females, the odds of being unemployed compared to being employed are decreased by being 25 years old or more. For males, the odds of being unemployed compared to being employed are decreased by any level of education attained rather to holding a first degree. For

females, the odds of being unemployed compared to being employed are increased by completing all levels until secondary education rather to holding a first degree.

The robustness checks provide evidence of structural validity and vary according to the distribution of the population. They indicate that the odds for employment are increased for higher education graduates/postgraduates aged 30 and more or not leaving in Athens (the latter is not demonstrated for males).

A notable difference for males of rest urban areas is in the increased odds of being unemployed compared to being employed by being 45-64 years old rather to being 15-24 years old. In addition, the level of education attained has a different effect on each age group. For males aged 30 or more, the odds of being unemployed compared to being employed are increased considerably by achieving any educational level (except for postgraduate education) rather to holding a first degree.

A notable difference for females between Athens and semi-urban areas is in the increased odds of being unemployed compared to being employed for any level of education attained especially by being a TEI graduate - rather to holding a first degree. For females aged 30 or over, the odds ratios of being unemployed compared to being employed are increased considerably by achieving any educational level rather to holding a first degree.

Table 7. Results for Attica (1988)

MALES					Robustness checks							
					Athens		Rest of urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-1.35	0.1	0	0.259	0	0.262	0.01	0.213	0	0.169	0	0.32
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.64	0.1	0	0.527	0	0.512	0.93	0.953	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.03	0.14	0	0.358	0	0.336	0.74	0.775	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-0.84	0.14	0	0.432	0	0.416	0.93	1.068	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	-0.83	0.47	0.08	0.436	0.09	0.452	0.82	0.007	0.26	0.417	0.63	0.748
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	-0.04	0.14	0.75	0.957	0.68	0.944	0.55	0.518	0	0.558	0	2.071
12 years of schooling	-0.12	0.11	0.29	0.886	0.39	0.904	0.69	0.691	0	0.593	0.02	1.639
9 years compulsory education	-0.25	0.13	0.05	0.779	0.16	0.831	0.24	0.323	0	0.446	0	1.898
Primary school graduates and below	-0.11	0.11	0.33	0.895	0.62	0.943	0.5	0.57	0	0.437	0	1.979
Constant	-1.08	0.11	0	0.339	0	0.35	0.17	0.308	0	0.436	0	0.06

FEMALES					Robustness checks							
					Athens		Semi-urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-0.26	0.08	0	0.772	0.01	0.786	0.36	0.576	0	0.453	0.37	1.142
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-1.17	0.09	0	0.31	0	0.302	0.51	0.653	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.58	0.11	0	0.205	0	0.204	0.01	0.085	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-2.22	0.15	0	0.109	0	0.113	0.02	0.056	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	-0.08	0.39	0.85	0.928	0.83	0.921	n.a.	n.a.	0.5	0.669	0.23	1.94
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	-0.18	0.13	0.16	0.838	0.12	0.819	0.09	8.868	0	0.562	0	2.619
12 years of schooling	0.06	0.09	0.52	1.062	0.59	1.052	0.29	3.311	0.05	0.803	0	2.912
9 years compulsory education	0.282	0.13	0.03	1.326	0.01	1.424	0.48	2.415	0.86	1.028	0	4.828
Primary school graduates and below	0.117	0.11	0.28	1.124	0.2	1.154	0.1	6.077	0	0.597	0	2.749
Constant	-0.44	0.09	0	0.645	0	0.652	0.07	0.125	0	0.627	0	0.036

Table 8 displays the odds of being unemployed at Attica in 1992. Parameter estimates are significant at 1% level except for some groups in education and all training groups. With regard to males only MSc or PhD holders (10% level) and primary school graduates and below (3% level) have significant estimates. Education categories with significant estimates for females are 12 years of schooling, 9 years compulsory education and primary school graduates and below (all at 1% level).

There are no gender differences regarding the values of odds (e.g. less or more than 1) for the general model. Both for males and females, the odds of being unemployed compared to being employed are increased by being not-married rather than married. Both for males and females, the odds of being unemployed compared to being employed are decreased by being 25 years old or more. Both for males and females, the odds of being unemployed compared to being employed are increased for achieving any level of education other than a first degree. Both for males and females the odds of being unemployed compared to being employed are increased by completing CVT.

The robustness checks provide evidence of structural validity and vary according to the distribution of the population. Males in rest of urban areas completing primary

education have increased odds of being employed compared to holding a first degree. In addition, for males in rest of urban areas apprenticeship seems to be very important in employment prospects. Holding a first degree is particularly important for the employment prospects of males aged more than 30 years old. The picture for females is more integrated as only two estimators resulting from the age groups robustness tests deviate from the general model.

A notable difference for males of rest of urban areas - as compared to those of Athens - is in the decreased odds of being unemployed compared to being employed when being a primary school graduate rather to holding a first degree. Also for males in Athens - compared to the general findings - the odds of being unemployed compared to being employed are increased by completing an apprenticeship rather to not participating in training courses (the opposite is indicated for males in rest of urban areas). Moreover, males aged 30 and more have more odds to be employed by holding a first degree. On the other hand, males aged less than 30 have a greater odd to be employed only over those having finished postgraduate studies. Also for males aged more than 30 years old the odds of being unemployed compared to being employed are increased by completing CVT.

The residential robustness tests for females are not differentiated from the general model (e.g. the values of odds remain for each variable less or more than 1). Furthermore, females less than 30 that hold a first degree have decreased odds to employment only against postgraduates. Females aged 30 and more have increased odds to employment by holding a first degree. Finally, for females aged more than 30 years old the odds of being unemployed compared to being employed are increased by completing CVT rather to not participating in training courses. About the non-impact of training programmes on the Greek labour market at national and regional (NUTS-2) level see also Rodokanakis, 2009 & 2010; Rodokanakis and Tryfonidis, 2009; Rodokanakis and Vlachos, 2012.

Table 8. Results for Attica (1992)

MALES					Robustness checks							
					Athens		Rest of urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-1.13	0.107	0	0.322	0	0.304	0.09	0.412	0	0.209	0	0.363
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.97	0.099	0	0.379	0	0.361	0.06	0.414	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.33	0.142	0	0.263	0	0.246	0.53	0.669	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.04	0.142	0	0.355	0	0.337	0.42	0.592	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	0.655	0.371	0.08	1.925	0.06	2.011	n.a.	n.a.	0.68	1.333	0.053	2.389
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	0.104	0.173	0.55	1.109	0.72	1.069	0.1	3.846	0.8	0.942	0.948	1.018
12 years of schooling	0.175	0.125	0.16	1.191	0.16	1.202	0.91	1.09	0.8	0.955	0.027	1.48
9 years compulsory education	0.079	0.142	0.58	1.082	0.58	1.088	0.92	1.073	0.42	0.854	0.032	1.55
Primary school graduates and below	0.301	0.127	0.02	1.351	0	1.479	0.57	0.681	0.1	0.69	0	2.151
Apprenticeship	-0.06	0.541	0.92	0.945	0.91	1.061	0.82	0.007	0.91	1.075	0.695	0.67
Intra-firm training	-3.73	8.057	0.64	0.024	0.64	0.024	n.a.	n.a.	0.6	0.017	0.854	0.034
CVT	0.522	0.559	0.35	1.685	0.32	1.745	n.a.	n.a.	0.72	0.679	0.053	3.326
Popular training	-2.72	12.81	0.83	0.066	0.83	0.069	n.a.	n.a.	n.a.	n.a.	0.856	0.022
Non-participation in trainings course(s) ever	-	-	-	-	-	-	-	-	-	-	-	-
Constant	-1.27	0.131	0	0.281	0	0.292	0.06	0.269	0	0.264	0	0.06

FEMALES					Robustness checks							
					Athens		Semi-urban areas		Aged less than 30		Aged 30 and more	
Variables	b_k	s.e.	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)	Sig.	Exp(b_k)
Marital status	-0.23	0.083	0.01	0.795	0.01	0.807	0.17	0.516	0	0.533	0.676	0.947
Aged 15-24	-	-	-	-	-	-	-	-	n.a.	n.a.	n.a.	n.a.
Aged 25-34	-0.9	0.091	0	0.405	0	0.393	0.13	0.459	n.a.	n.a.	n.a.	n.a.
Aged 35-44	-1.41	0.111	0	0.245	0	0.239	0.04	0.29	n.a.	n.a.	n.a.	n.a.
Aged 45-64	-1.79	0.127	0	0.167	0	0.174	0	0.085	n.a.	n.a.	n.a.	n.a.
MSc or PhD holders	0.094	0.546	0.86	1.099	0.8	1.151	n.a.	n.a.	0.54	0.521	0.282	1.962
University graduates	-	-	-	-	-	-	-	-	-	-	-	-
TEI graduates	0.197	0.141	0.16	1.217	0.12	1.254	0.75	1.291	0.08	1.362	0.115	1.459
12 years of schooling	0.392	0.105	0	1.48	0	1.532	0.53	1.557	0	1.713	0	1.892
9 years compulsory education	0.691	0.135	0	1.995	0	2.031	0.48	1.782	0	2.177	0	2.913
Primary school graduates and below	0.949	0.114	0	2.584	0	2.533	0.02	4.819	0	2.405	0	3.064
Apprenticeship	-0.33	0.509	0.51	0.717	0.31	0.565	n.a.	n.a.	0.95	0.963	0.548	0.539
Intra-firm training	-3.14	6.016	0.6	0.043	0.6	0.044	n.a.	n.a.	0.68	0.02	0.756	0.019
CVT	0.364	0.849	0.67	1.439	0.65	1.468	n.a.	n.a.	0.21	4.78	0.651	0.023
Popular training	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-participation in trainings course(s) ever	-	-	-	-	-	-	n.a.	n.a.	-	-	-	-
Constant	-0.99	0.109	0	0.371	0	0.358	0.24	0.439	0	0.274	0	0.061

Conclusions

Binary logistic regression is employed in order to determine the effects of gender, marital status, age, education and training - the latter only for 1992 - on unemployment/employment. There are separate analyses with respect to gender for each region and for each year. The robustness checks based on residential and age grouping provide evidence of structural validity and vary according to the distribution of the population.

Regarding marital status for both areas in 1988 and 1992, the odds of being unemployed increase for non-married. Moreover, for both areas and for the same period, the most vulnerable age group to unemployment is between 15-24 years of age.

Gender differences both in Central Macedonia and Attica for 1988, are present only for the level of education. For Central Macedonia, the individuals most vulnerable to unemployment are females holding a postgraduate degree and males that have achieved a TEI degree. For Attica, the individuals most vulnerable to unemployment are males holding a first degree and females that have attended up to secondary education.

While there are not any gender differences in Attica for 1992, gender is differentiated to the level of education and training in Central Macedonia for the same year. For Central Macedonia, the individuals most vulnerable to unemployment are males holding a postgraduate degree or completed secondary education, and females completing any level of education up to achieving a TEI degree. For Attica, the individuals less vulnerable to unemployment are those holding a first degree. Regarding training, for Central Macedonia, the males most vulnerable to unemployment are those that have completed an apprenticeship and the females less vulnerable to unemployment are only those that have completed CVT. On the other hand, the odds for males and females in Attica of being unemployed compared to being employed are increased by completing CVT.

Higher education attainment (over TEI) for females in Central Macedonia in 1992, and in Attica in 1988 for females increases the odds for employment. Both male and female university graduates in Attica in 1992 have increased odds to be employed. It would not be proper to conclude on the effect of training on the odds of being employed in 1992, as active population in Greece was not interested in participating to training programmes (the Greek LFS is representative of active population

in Greece). However, even if we were to rely on these insignificant estimators, there would be a mixed outcome since different forms of training - both across sexes and regions - seem to increase the odds of being employed.

Since the sample does indicate very little participation in training programmes, we cannot obtain significant results. It seems, however, that the relative preference of both males and females for apprenticeship did not pay off, since the odds of being unemployed compared to being employed are increased. Nevertheless, the choice of no participation to training programmes is not always the best choice, as CVT both for males and females, and intra-firm training and popular training have decreased odds of being unemployed.

The research would merit attention of a wider international readership, since the paper does offer evidences that could be useful for comparative research among European regions, especially comparing CSFs.

References

Aakvik, A., & Dahl, S. (2006). Transitions to employment from labour market enterprises in Norway, *International Journal of Social Welfare*, 15 (2), 121-30.

Albrecht, J., van den Berg, G.J., & Vroman, S. (2005). The knowledge lift: The Swedish Adult Education Program that aimed to eliminate low worker skill levels, IZA Discussion Paper 1503, Bonn.

Altonji, J. G., & Blank, R. M. (1999). Race and gender in the labor market, in Ashenfelter O. and Card D. (eds), Handbook of Labor Economics, volume 3C, Handbooks in Economics, vol. 5, Amsterdam: North-Holland, 3143-3259.

Arellano, F.A. (2005). Do training programmes get the unemployed back to work? A look at the Spanish experience, Working Paper 05-25, Economics Series 15, Departamento de Economia, Universidad Carlos III de Madrid.

Azmat, G., Güell, M., & Manning, A. (2004a). Gender gaps in unemployment rates in OECD countries, CEP Discussion Paper No 607, CEP, LSE.

Azmat, G., Güell, M., & Manning, A. (2004b). Women looking for work, CentrePiece Magazine Article 9 (2), Summer, CEP, LSE.

Balourdos, D., & Chryssakis, M. (1998). Programmes of continuing vocational training: Statistical indications, evaluation and perspectives (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (eds), *Unemployment, employment, education-training in Greece and France.* Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, 133-50.

Becker, G. S. (1964). Human capital, Columbia University Press, New York.

Becker, G.S. (1975). Human capital: A theoretical and empirical analysis with special reference to education (2nd ed.), Columbia University Press, New York.

Bell, B., Blundell, R., & van Reenen, J. (1999). Getting the unemployed back to work: The role of targeted wage subsidies, *International Tax and Public Finance*, 6(3), 339-60.

Berman, E., Bound, J., and Griliches, Z. (1994). Changes in the demand for skilled labor within US manufacturing industries: Evidence from the annual survey of manufacturing, *Quarterly Journal of Economics*, CK, 367-98.

Bjorklund, A., & Regner, H. (1996). Experimental evaluation of European labour market policy, in Schmid G., O'Reilly J. and Schomann K. (eds), *International handbook of labour market policy and evaluation*, Edward Elgar, Aldershot, UK, 89-114.

Blau, F. D., & Kahn, L. M. (2003). Understanding international differences in the gender pay gap, *Journal of Labor Economics*, 21, 106-44.

Blaug, M. (1975). The empirical status of human capital theory, *Journal of Economic Literature*, 14, 827-55.

Bonnal, L., Fougere, D., & Serandon, A. (1994). L'impact des dispositifs d'emploi sur le devenir des jeunes chomeurs: Une evaluation econometrique sur donaces longitudinales, Economie et Prevision, 115, 1-28.

Brodaty, T., Crepon, B., & Fougere, D. (2001). Using matching estimators to evaluate alternative youth employment programs: Evidence from France, 1986-1988, in Lechner M. and Pfeiffer F. (eds), *Econometric evaluation of labour market policies*, Physica, Heidelberg.

Calmfors, L. (1994). Active labour market policy and unemployment: A framework for the analysis of crucial design features, OECD Economic Studies, No 22, spring, 7-47.

Calmfors, L. (1995). What can we expect from active labour market policy?, The Institute for International Economic Studies, reprint series, No 546, University of Stockholm.

Calmfors, L., & Skedinger, P. (1995). Does active labour-market policy increase employment? Theoretical considerations and some empirical evidence from Sweden, *Oxford Review of Economic Policy*, 11 (1), 91-109.

Card, D., & Sullivan, D. (1988). Measuring the effect of subsidized training programs on movements in and out of employment, *Econometrica*, 56, 497-530.

Cavaco, S., Fougere, D., & Pouget, J. (2005). Estimating the effect of a retraining program for displaced workers on their transition to permanent jobs, IZA Discussion Paper 1513, Bonn.

Centeno, L., Centeno, M., & Novo, A.A. (2005). Evaluating the impact of a mandatory job search program: Evidence from a large longitudinal data set (mimeo).

Chletsos, M. (1998). The education as an active employment policy: Limits and preconditions of implementation. The case of Greece (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (eds), *Unemployment, employment, education-training in Greece and France.* Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, 151-79.

Christodoulakis, N., & Kalyvitis, S. (1995). Likely effects of the CSF 1994-1999 on the Greek economy, Discussion Paper No 46, KEPE, Athens.

Cockx, B. (2003). Vocational training of unemployed workers in Belgium, *Applied Economics Quarterly*, 49 (1), 23-48.

Cockx, B., van der Linden, B., & Karaa, A. (1998). Active labour market policies and job tenure, *Oxford Economic Papers*, 50 (4), 685-708.

Cueto, B., & Mato, F. J. (2009). A non-experimental evaluation of training programmes: Regional evidence for Spain, *The Annals of Regional Science*, 43 (2), 415-33.

de la Fuente, A. (2003). Human capital in a global and knowledge-based economy - Part II: assessment at the EU country level, Final report, Instituto de Análisis Económico (CSIC), Employment and European Social Fund, European Commission, Directorate-General for Employment and Social Affairs, Unit A.1.

Economic and Social Committee of Greece (1998). Opinion of Initiative for the "Vocational Training", Athens, June (in Greek).

ESYE (National Statistical Service of Greece, 1988-2003). Statistical Yearbook and Labour Force Survey. ΕΣΥΕ (www.statistics.gr).

EUROSTAT (1995). Education and employment prospects.

EUROSTAT (1996). Labour Force Survey.

Fay, R. (1996). Enhancing the effectiveness of active labour market policies: Evidence from programme evaluations in OECD countries, Labour Market and Social Policy occasional papers, No 18, OECD, Paris.

Fitzenberger, B., & Speckesser, S. (2005). Employment effects of the provision of specific professional skills and techniques in Germany, Department of Economics, Goethe-University Frankfurt (mimeo).

Gerfin, M., & Lechner, M. (2000). Micro-econometric evaluation of the active labour market policy in Switzerland, IZA Discussion paper No 154, Bonn.

Gravaris, D. (1991). The politico-economic foundations of employment policies (in Greek), *Topos: Review of Urban and Regional Studies*, No 4, Athens.

Graversen, B. (2004). Employment effects of active labor market programs: Do the programs help welfare benefit recipients to find jobs?, PhD thesis, Department of Economics, University of Aarhus.

Gritz, M.R. (1993). The impact of training on the frequency and duration of employment, *Journal of Econometrics*, 57(1-3), 21-52.

Ham, J. C., & LaLonde, R. J. (1991). Estimating the effect of training on employment and unemployment durations: Evidence from experimental data, Working Paper No 3912, NBER, Cambridge, MA.

Hämäläinen, K., & Ollikainen, V. (2004). Differential effects of Active Labor Market Programmes in the early stages of young people's unemployment, VATT Research Reports 115, Helsinki.

Heckman, J. J., LaLonde, R. J., & Smith, J. A. (1999). The economics and econometrics of active labour market programs, in Ashenfelter O. and Card D. (eds), *Handbook of Labor Economics*, volume 3A, Elsevier, Amsterdam, 1865-2097.

Hogelund, J., & Holm, A. (2005). Returning the long-term sick-listed to work: The efforts of educational measures and employer separations in Denmark, in Saunders P. (ed.), *Welfare to Work in Practice. Social Security and Participation in Economic and Social Life*, International Studies on Social Security, vol. 10, Aldershot, Ashgate.

Hujer, R., Thomsen, S., & Zeiss, C. (2004). The effects of vocational training programmes on the duration of unemployment in Eastern Germany, IZA Discussion Paper 1117, Bonn.

Iliades, N. (1995). Continuing vocational training in Greece, National Report (in the context of FORCE), National Institute of Labour, January (in Greek).

IN.E./GSEE (Institute of Labour/General Confederation of Workers of Greece) – ADEDY (Civil Servants' Supreme Administrative Council) (1999). The Greek economy and the employment, Annual Report, Reports No 1, Athens, August (in Greek).

IN.E./GSEE-ADEDY (2008). The Greek economy and the employment, Annual Report, chapter 6, 149-60, Athens, August (in Greek).

Jackman, R. (1995). What can active labour market policy do?, Discussion Paper No 226, CEP, LSE.

Jackman, R., Layard, R., & Nickell, S. (1996). Combating unemployment: Is flexibility enough?, Discussion Paper No 293, CEP, LSE.Kaitz, H. B. (1979). Potential use of Markov process models to determine program impact, in Bloch F.E. (ed.), *Research in labour economics*, JAI Press, Greenwich, CT.

Kapstein, E. B. (2001). Virtuous circles? Human capital formation, economic development and the multinational enterprise, paper presented to the OECD Conference on FDI, human capital and education in developing countries, organised by the OECD Development Centre, Paris, 13-14 December.

Katsikas, Ch. (2005). Studies-Vocation and labour market, Atrapos (in Greek).

Kluve, J., & Schmidt, C. M. (2002). Can training and employment subsidies combat European unemployment?, Economic Policy: A European Forum, issue 35, October, 411-48.Kluve, J., Lehmann, H., & Schmidt, C. M. (1999). Active labour market policies in Poland: Human capital enhancement, stigmatization, or benefit churning?, *Journal of Comparative Economics*, 27 (1), 61-89.

Kluve, J., Lehmann, H., & Schmidt, C.M. (2005). Disentangling treatment effects of Active Labor Market Policies: The role of labor force status sequences, RWI Essen (mimeo).

Larsson, L. (2000). Evaluation of Swedish youth labour market programmes, Working paper No 6, Department of Economics, Uppsala University. Lechner, M. (2000). An evaluation of public sector sponsored continuous vocational training programs in East Germany, *Journal of Human Resources*, 35, 347-75.

Lechner, M., Miquel, R., & Wunsch, C. (2005). Long run effects of public sector sponsored training in West Germany, CEPR Discussion Paper 4851.

Lechner, M., Miquel, R., & Wunsch, C. (2007). The curse and blessing of training the unemployed in a changing economy: The case of East Germany after unification, German Economic Review, vol. 8, November, 468-509.

Leetmaa, R., & Vörk, A. (2004). Evaluation of Active Labor Market Programmes in Estonia, PRAXIS Tallinn (mimeo).

Linardos-Rylmon, P. (1998). Vocational training and labour market: Indispensable changes into the function of the continuing training system in Greece (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (eds), *Unemployment, employment, education-training in Greece and France.* Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, 233-6.

Lorentzen, T., & Dahl, E. (2005). Active labour market programmes in Norway: Are they helpful for social assistance recipients?, *International Journal of Social Welfare*, 14 (2), 86-98.

Machin, S. (1996). Wage inequality in the UK, Oxford Review of Economic Policy, XII, 47-64.

Machin, S., and van Reenen, J. (1998). Technology and changes in skill structure: Evidence from seven OECD countries, *The Quarterly Journal of Economics*, November, 1215-44.

Malmberg-Heimonen, I., & Vuori, J. (2005). Activation or discouragement - The effect of enforced participation on the success of job-search training, *European Journal of Social Work*, 8 (4), 451-67.

Mato, F. J., & Cueto, B. (2008). *Un analisis de los effectos de las politicas de formacion a desempleados, Rev. Econ. Apl.* http://www.revecap.com/revista/aceptados/matocueto.pdf (in press).

Meghir, C., Ioannides, Y., & Pissarides, C. (1989). Female participation and male unemployment duration in Greece, *European Economic Review*, 33, 395-406.

Murray, A., and Steedman, H. (1998). Growing skills in Europe: The changing skills profiles of France, Germany, the Netherlands, Portugal, Sweden and the UK, TSER, Discussion Paper No 399, CEP, LSE.

OECD (1990). Employment Outlook, OECD, Paris.

OECD (1993). Active labour market policies: Assessing macro-economic and micro-economic effects, Employment Outlook, ch. 2, OECD, Paris, 39-80.

OECD (1999a). Employment Outlook, OECD, Paris.

OECD (1999b). Labour Market Statistics, Statistical Compendium, OECD, Paris. OECD (2002). Women at work: Who are they and how are they faring?, OECD Employment Outlook, 61-126.

Papakonstantinou, G. (1998). Education-training as factors of investment in human capital (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (eds), *Unemployment, employment, education-training in Greece and France.* Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, 125-32.

Prais, S. J. (1995). Productivity, education and training: An international perspective, National Institute for Economic and Social Research, Cambridge University Press.

Raaum, O., & Torp, H. (2002). Labour market training in Norway: Effect on earnings, *Labour Economics*, 9 (2), 207-47.

Rees, A. (1973). The economics of work and pay, Harper and Row, New York.

Regner, H. (2002). A non-experimental evaluation of training programmes for the unemployed in Sweden, *Labour Economics*, 9 (2), 187-206.

Ridder, G. (1986). An event history approach to the evaluation of training, recruitment and employment programmes, *Journal of Applied Econometrics*, 11, 109-26.

Rodokanakis, S. (2009). Comparing the probability of unemployment in Southern Greece vis-à-vis the entire country, *Bulletin of Geography – Socio-economic Series*, No 12, 17-43.

Rodokanakis, S. (2010). Comparing the probability of unemployment in Northern Greece vis-à-vis the entire country, *Journal of Economic Asymmetries*, 7 (1), 137-74.

Rodokanakis, S., & Tryfonidis, D. (2009). Unemployment hazard in the Aegean islands: Econometric analysis of the LFS micro-data, in Brox J. A. and Baltas N. (eds), *The global economics of a changing environment: Studies in the structure, performance and reform of economics, organizations and business throughout the globe*, chapter 14, North Waterloo Academic Press, Waterloo, Canada, June, 211-24.

Rodokanakis, S., & Vlachos, V. (2012). Measuring the unemployment risk in Northern Greece from the LFS micro-data during the period 1994-2006, *The Review of Economic Analysis* (forthcoming). vol. 4, No 2, 224-46.

Rosholm, M., & Skipper, L. (2003). Is labour market training a curse for the unemployed? Evidence from a social experiment, IZA Discussion paper No 716, IZA, Bonn.

Rosholm, M., & Svarer, M. (2004). Estimating the threat effect of Active Labor Market Programs, Working Paper No 6, Department of Economics, University of Aarhus.

Stanley, M., Katz, L., & Krueger, A. B. (1999). Impacts of employment and training programs: The American experience, Harvard University (mimeo).

Steiger, H. (2005). Is less more? A look at non-participation in Swiss active labor market programmes, University of St. Gallen (mimeo).

Stenberg, A. (2005). Comprehensive education for the unemployed - Evaluating the effects on unemployment of the Adult Education Initiative in Sweden, Labour, 19, 123-46.

Stevens, M. (1994). An investment model for the supply of training by employers, *Economic Journal*, 104, 556-70.

Tatch, J., Pratten, C., & Ryan, P. (1998). Employment structures and labour market aspects related to VET, in Vocational education and training – the European research field, background report, volume 1, reference document, CEDEFOP, Thessaloniki, Brussels/Luxembourg, 83-102.

Torp, H. (1994). The impact of training on employment: Assessing a Norwegian labour market programme, *Scandinavian Journal of Economics*, 96, 531-50. van Ours, J.C. (2001). Do active labour market policies help unemployed workers to find and keep regular jobs?, in Lechner M. and Pfeiffer F. (eds), *Econometric evaluation of labour market policies*, Physica, Heidelberg.

van Smoorenburg, M.S.M., & van der Velden, R.K.W. (2000). The training of school leavers: Complementarity or substitution?, *Economics of Education Review*, 19, 207-17.

Weber, A., & Hofer, H. (2003). Active job-search programs a promising tool? A micro-econometric evaluation for Austria, IHS working paper, Economic Series 131, Vienna.

Winter-Ebmer, R. (2006). Coping with a structural crisis: Evaluating an innovative redundancy-retraining project, *International Journal of Manpower*, 27 (8), 700-21.

Woodhall, M. (1987). Economics of education: A review, in Psacharopoulos G. (ed.), Economics of education: Research and studies, Pergamon Press, 1-8.

www.ypes.gr/attiki

Zweimuller, J., & Winter-Ebmer, R. (1996). Manpower training programmes and employment stability, *Economica*, 63 (249), 113-30.